



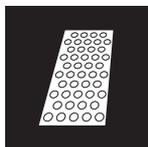
PHOTOS MAY SHOW OPTIONAL OR CUSTOMISED EQUIPMENT.



Double basic line



Dots



Dot'n line



Longflex



Edgeflex



Chess

## SPRAY PLASTIC AND DOT'N LINE APPLICATION

The BM 5000 series provides you with a variety of high capacity line marking machines designed for large scale jobs such as marking highways, motorways or airport runways.

The material tank capacity can be up to 780L. The possibility of large material capacity naturally gives fewer stops during the day for refilling.

The BM 5000 has a two-seat slidable drive and operator section for flexible working on the left or right side.

Depending on the equipment, the machine can apply both flat and profiled markings, single and double lines of different widths, as well as for simultaneous application of continuous and interrupted lines.

# KNOWING THE BM 5000

## OPERATOR SECTION

Quick and easy change from side to side for marking left and right. Dual torque steering - good directional stability. Cruise control can be added as optional equipment.

## LINEMASTER COMPUTER

With the LineMaster Computer you can control up to 6 paint or spray guns, 6 bead guns and equipment with up to 24 shutters. Moreover, it controls all these various sets of equipment in this ONE unit.

## FULL REAR VIEW

**DIESEL TANKS**  
Allows for a full day's work.

**ENGINE ROOM**  
Easy access for service.

**PRESSURIZED BEAD TANK**  
Tank divided in two tanks. Individual or single outlet. (2 in 1)

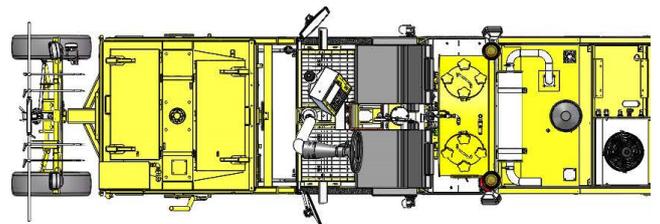
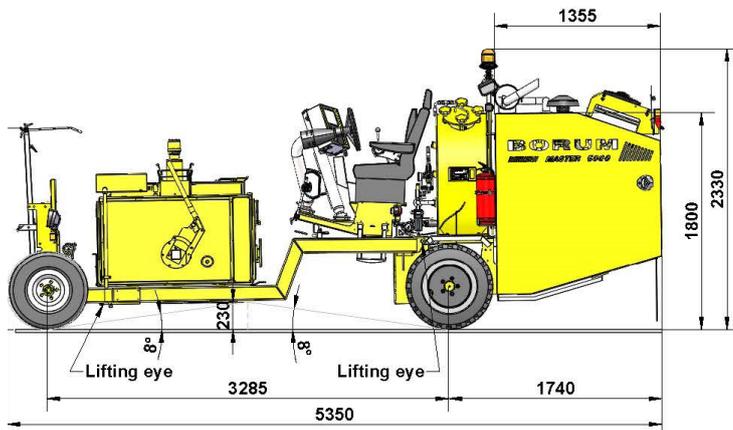
**WHEEL MOTOR**  
2-speed wheel motor. Allows working uphill.

## MATERIAL TANKS

The possibility of an extra large material tank for major works ensures the most efficient workday and fast progression of the road works.

## CHASSIS

Solid double-frame construction



# TECHNICAL SPECIFICATIONS

ENGINE	
Manufacturer	Kubota
Type	Turbo (Diesel)
Cooling	Water
Cylinder	4 stroke 3800 cm <sup>3</sup>
RatedPower	74 KW
Approval	EU Stage IIIA resp. TIER 3
COMPRESSOR	
Compressor Capacity	Choice of 1-2 compressors can give 1800 - 3600 L/min @ 10 bar. Integrated oil-cooling system. Air-cooler incl. water separator
FILLING CAPACITIES	
Fuel tank capacity	180 L (2 x 90 L) - Diesel
Hydraulic tank size	93 L
Bead capacity	330 L (2 x 165 L). Pressurized (max 3 bars)
MATERIAL TANK	
Material Tank	450 L, 630 L, or 780 L
DRIVING PROPERTIES	
Drive angle	12.5 degrees / 22% (low gear 7200 kg)
Turning radius	4.90 m.
Steering	Dual torque steering
TRANSMISSION	
Hydrostatic transmission	For variable speed
Speed	Low gear 0-12 km/h, high gear 0-24 km/h
ELECTRICAL SYSTEM	
Electrical system	12 V / 150 Amp
CONTROL UNIT	
Borum LineMaster	Program up to 99 different line types. Organise lines in up to 30 marking programs. 8" display. Transfer of daily marking reports. Data about road marking jobs can be accessed online (optional).
COLOUR	
Colour	RAL 1007 (Other colours available on request)
DIMENSIONS	
Length	5350 mm
Width	1300 mm
Height	2250 mm (Without Beacon)

# THERMOPLASTIC SPRAY APPLICATION (PRESS. TANK)

The thermoplastic spray application equipment works via a pressure tank. The amount of material that is put on the road is set by the pressure of the tank and the air pressure of spraying. This offers you an easy to use the system.



Sliding retainer frame, upon which 1-3 spray guns and 1-3 bead guns can be attached. Easy slidable from side to side for an optimal working position. Ground distance is maintained by retainer wheels hereby ensuring a constant road marking width.

Lifting of retainer from operators seat is done using a hydraulic cylinder.

All material pipes are oil-jacketed and insulated to maintain an ideal material temperature.

Effective heating of the complete unit using a centrifugal pump, 42 L/min, hydraulically driven.

Line thickness is typically between 0.75 mm to 1.5 mm.

Marking speed up to 15 km/h depending on the work conditions, operator, etc.

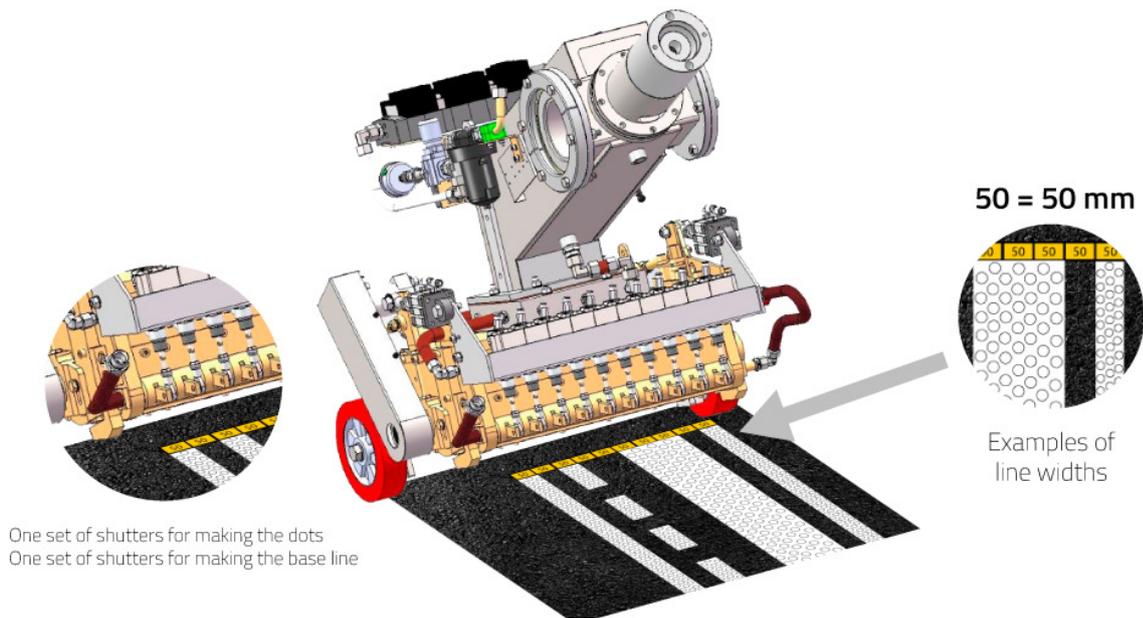
## GUN FOR SPRAY-PLASTIC APPLICATION

Automatic high-capacity spray plastic gun. Consists of an oil jacketed gun body and a pneumatic cylinder. Possibility to apply line widths ranging from 10 - 20 cm depending on line thickness, work conditions, application speed and layer thickness. As an alternative, we offer a narrow nozzle, which can spray 5-15 cm with one gun.

Optional narrow nozzle size of 3 mm or wide nozzle size of 7 mm.

# THERMOPLASTIC DOT'N LINE EXTRUDER

The Dot'n line system offers a three-in-one solution for thermoplastic markings. This equipment can apply flat lines, dots and unique combination of lines and dots using only one extruder head.



In the drawing you can see examples of different valve set-ups giving different widths. The total line width can be between 30-50 cm depending on the set-up. The line width starts at 5 cm and can be built up to 50 cm with 5 cm standard shutters.

By using two sets of shutters the base line has time to cure slightly before the Dots are applied. Consequently, the Dots will settle on top of the line with sharp edges, securing the optimum retroreflection.

The diameter of dots can be chosen between  $\varnothing 18$  and  $\varnothing 45$  mm depending on the chosen drum. The number of dots/meter is 15-35 dots and is controlled by the LineMaster.

The shutters have no contact with the high tensile steel drum and therefore wear is minimalized and lifetime is prolonged.

Effective heating of the complete unit using a centrifugal pump, 42 L/min, hydraulically driven.

Pneumatically controlled quick cleaning system for removal of solids left in the extrusion slot. It can be activated while extrusion is in process and is only slightly detectable on the line in the form of a moderate thickening of the layer.

Continuous circulation of the thermoplastic material inside the equipment. This avoids settling and catching of solid parts and prevents unnecessary wear of mechanical parts.

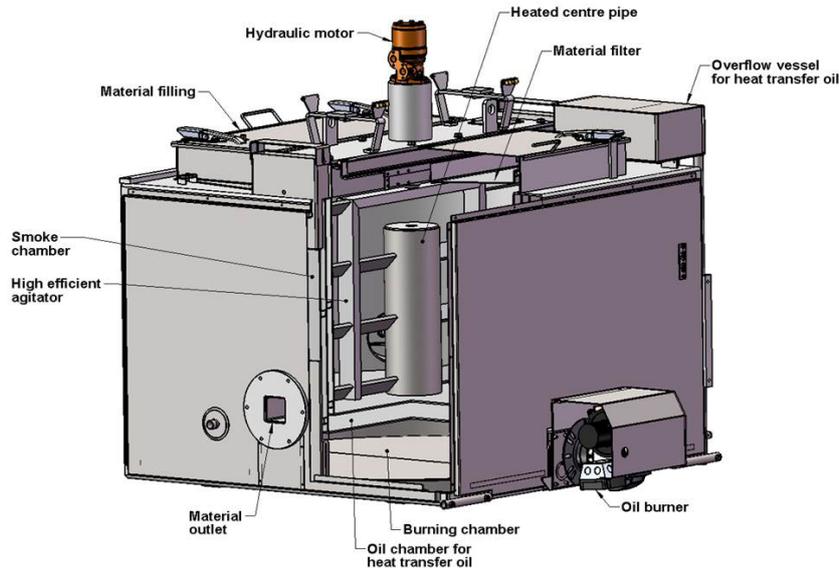
The application speed depends on the type of application and goes up to 6 km/h.

## AUGER SCREW PUMP WITH CONTINUOUS RECIRCULATION SYSTEM

The transport of material from tank to Dot'n'Line head is done by a hydraulically driven auger screw pump, which is electronically controlled. The screw pump has a permanent thermoplastic re-circulation system, which ensures a constant flow also past the inactive extrusion shutters, keeping solid parts from settling and keeping the equipment ready for working.

Build-in pressure regulating system ensures that line width and thickness do not change no matter the number of shutters involved in the current marking assignment.

# PRESSURIZED MATERIAL TANK



Pressurized tank indirectly heated via thermal oil. The thermal oil and thermoplastic material temperature is thermostatically controlled and regulated automatically.

## BURNER SYSTEM

Diesel burner system for heating of the thermal oil (and thermoplastic). Propane burner available on demand.

## VERTICAL AGITATOR (MIXER)

With hydraulic transmission. Heated center pipe for efficient uniform temperature control. Perfect melting and homogenization of the thermoplastic. Stable construction with foundation and bearings at the top of the material tank.

## ADVANTAGES WHEN USING A PRESSURISED TANK FOR SPRAY:

The line thickness is affected by the machine speed, this is useful for applying thicker lines in curves and areas with higher wear and tear levels.

The maintenance for the pressure tank is minimal compared to the thermoplastic spray pump system.

## QUICK CLEANING

Pneumatically controlled quick cleaning system for removal of solids left in the extrusion slot. It can be activated while extrusion is in process and is only slightly detectable on the line in the form of a moderate thickening of layer.

## LINEMASTER FEATURES

The Borum LineMaster control unit is an easy way of setting and controlling your line marking jobs. The LineMaster is attached to the operator's section of the machine and gives you full control of all your line marking tasks, from line application and pre-marking to reporting and invoicing.

It is possible to store up to 99 different line types, and to arrange these in up to 30 different marking programs. You are also able to pre-set line widths, line types and different combinations to have them ready for marking, and can instantly adjust them on the go.



Furthermore, you are able to view the status of various parts of the machine (e.g. compressor) on the computer screen that will help with correctly maintaining the machine and avoiding break downs.

## THERMOPLASTIC SPRAY ADVANTAGES

Due to the equipment working via a pressure vessel, it is very simple and easy to use as the pressure in the vessel is the same as the pressure in the application. Furthermore, the tank requires very little maintenance.

Thermoplastic spray markings are a cost-efficient solution as the applied lines do not require as much material as extruded profiled markings. Furthermore, this type of material forms a uniform application that is more durable and dries faster compared to cold paint applications.



Having numerous dots in a line gives the light a lot of possible areas to fall onto and create a retro-reflective effect. This is essential for having clear visibility, especially while driving during night time.

The drainage effect of the profiled markings ensures that rain water will easily drain away from the lines, thus maintaining high reflective values in rainy weather. This is possible because of the structure that allows the water to drain. Furthermore, the profiled nature of the road marking produces a noise when driven over that will warn the driver against driving off the road.



### TYPICAL USES:

Thermoplastic spray plastic is generally used for road marking in inter-urban areas.



### LEARN MORE

Find out more in the Borum Knowledge Lab.

# ADDITIONAL EQUIPMENT

The additional equipment can be mounted on the machine according to your requirements. They are not necessary for the running of the machine but add to the comfort of the machine driver or to the functionality of the machine.



**Quick shift**



**Pre-marking system with paint can**



**BM Online**



**Air drier for bead tank**



**Bead alarm mounted on bead gun**



**Pointer turning with steering**  
With hydraulic lifting system



**Bar with pneumatic lift for mounting warning lights**  
(Comes without lights)



**Cone holder**



**Remote control for BM Lin-eMaster**



**Cruise control**



**Sunshade with 1 rotating light**



**Pre-marking system with paint gun**



**Airknife**



**Ejector filling of bead tank**



**Fixed pointer**  
With hydraulic lifting system